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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/669,184	09/22/2003	Steve Lemke	PALM-3284 . SG . DIV	4084
7590	06/01/2005		EXAMINER	
WAGNER, MURABITO & HAO LLP			CHEN, ALAN S	
Third Floor			ART UNIT	PAPER NUMBER
Two North Market Street				2182
San Jose, CA 95113				

DATE MAILED: 06/01/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)
	10/669,184	LEMKE ET AL.
	Examiner	Art Unit
	Alan S. Chen	2182

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 22 September 2003.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 21-34 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 21-28 and 30-34 is/are rejected.
- 7) Claim(s) 22 and 29 is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 22 September 2003 is/are: a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All b) Some * c) None of:
1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____. | 6) <input type="checkbox"/> Other: _____. |

DETAILED ACTION

Specification

1. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

The following title is suggested: SYSTEM FOR IDENTIFYING A PERIPHERAL DEVICE BY SENDING AN INQUIRY THERETO AFTER RECEIVING AN INTERRUPT NOTIFICATION MESSAGE IF THE INTERRUPT AND COMMUNICATION PORT MEET ~~ASL~~ PREDETERMINED CONDITIONS.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 21 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

4. Claim 21 recites the limitation "said system interrupt notification handler" in lines 9-10. There is insufficient antecedent basis for this limitation in the claim. For the purposes of furthering along prosecution, Examiner interprets this to mean a notification handler that handles system interrupts residing on the system.

5. Claims 22-27 are rejected as being dependent on a rejected base claim.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

7. Claims 21, 23-25 and 28,30-32 are rejected under 35 U.S.C. 102(e) as being anticipated by US Pat. No. 6,460,105 to Jones et al. (hereafter Jones).
8. As per claims 21 and 28, Jones discloses a method and computer system for identifying a peripheral device (Fig. 2, ports indicated are communication to external ports) detachably coupled to a computer system (Fig. 1, element 2 is by definition of “peripheral” devices that is well known to one of ordinary skill in the art, detachable), said method comprising receiving an interrupt from said peripheral device (Table I, PIO interrupt), said peripheral device being coupled to a communications port of said computer system responsive to said interrupt (Fig. 2, element 8 is port that couples to peripheral device, connection shown in Fig. 1), posting an interrupt notification message (Column 4, lines 45-50, the peripheral device generates an event packet; packet shown in Fig. 6) to alert a high priority device-specific notification handler (Fig. 1, element 15, shown in detail in Fig. 8), said high priority device-specific notification handler having a higher priority than a system interrupt from said peripheral device (priority is assigned in the message/packet generated, depending on the device attached to the port in Fig. 1, element 8, can be assigned the highest priority, e.g., it is critical that the interrupt by the change in state of the peripheral to be serviced; peripheral is capable of generating other notification values as indicated in Table I, “number of distinct interrupt sources”) without involving a system interrupt notification handler (no other handler is indicated by Jones, hence, a system interrupt notification

handler is not involved), servicing said interrupt notification message upon receipt thereof (Column 8, lines 35-45).

9. As per claims 23 and 30, Jones discloses claims 21 and 28, respectively, wherein said processor is operable to trigger a default action in the event that said high priority device-specific notification handler fails to handle said interrupt notification message (Column 9, lines 20-30 describe trap instructions causing the event handler to restore back to its original state).

10. As per claims 24-25 and 31-32, Jones discloses claim 21 and 28, respectively, wherein said communication ports are serial such as RS-232 (Fig. 2, PIO and TDR general ports which intrinsically can be part of the well known serial communication ports, e.g., RS-232 is a standard computer port around the time of Jones invention, being phased out by another serial protocol USB).

Claim Rejections - 35 USC § 103

11. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

12. Claims 26-27 and 33-34 are rejected under 35 USC 103(a) as being unpatentable over Jones in view of US Pat. No. 5,708,816 to Culbert.

13. As per claims 26 and 33, Jones discloses claims 21 and 28. Jones does not disclose expressly the method and computer system pertaining to a PDA.

Culbert discloses interrupt priority management applied to PDAs, where the CPU handles the interrupt. Culbert also discloses the architecture of the PDA having display port, Fig. 1, element 124, an input/output port, Fig. 1, element 122.

Jones and Culbert are analogous art because they are from the same field of endeavor in computer system architecture.

At the time of the invention it would have been obvious to a person of ordinary skill in the art to implement Jones computer system as a PDA.

The suggestion/motivation for doing so would have been the similarity and purpose of the PDA invention of Culbert clearly lends itself to Jones. Furthermore, form factor of computer systems is clearly obvious, where a PDA is a scaled/simplified version of a desktop system.

Therefore, it would have been obvious to combine Jones with Culbert for the benefit of miniaturizing the a computer system to a PDA level for convenience to the user.

14. As per claims 27 and 34, Jones combined with Culbert discloses claims 26 and 33, respectively, wherein Jones further discloses sensing pins of the communication port to determine voltage levels (Column 4, lines 45-55)

Allowable Subject Matter

15. Claims 22 and 29 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

16. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Art Unit: 2182

The following patents are cited to further show the state of the art with respect to interrupt management related to peripheral devices:

U.S. Pat. No. US005852743A to Yeh

U.S. Pat. No. US005721937A to Kurihara et al.

U.S. Pat. No. US006631394B1 to Ronkka et al.

U.S. Pat. No. US006429812B1 to Hoffberg

U.S. Pat. No. US005680624A to Ross

U.S. Pat. No. US006658510B1 to Bartucca

U.S. Pat. No. US006128672A to Lindsley

17. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alan S. Chen whose telephone number is 571-272-4143. The examiner can normally be reached on M-F 8:30am - 5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jeffrey A. Gaffin can be reached on (571) 272-4146. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

ASC
05/17/2005



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